

What is claimed is:

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1. A biliary catheter for use in combination with a guidewire and an endoscope, comprising:

an elongate shaft having a proximal end, a distal end and an injection lumen extending therethrough;

a guidewire lumen extending through a distal portion of the shaft between a proximal guidewire port and a distal guidewire port, the guidewire lumen being in fluid communication with the injection lumen of the shaft, the proximal guidewire port disposed proximal of the distal end of the shaft and distal of the proximal end of the shaft, the distal guidewire port disposed at the distal end of the shaft; and

a tubular member connected to the shaft, the tubular member extending proximally from the proximal guidewire port to a proximal end disposed distal of the proximal end of the shaft, the tubular member defining a guidewire lumen extension adapted to permit the guidewire to be retracted from guidewire lumen and re-inserted therein.

2. A biliary catheter as in claim 1, wherein the tubular member has a distal end disposed distal of the proximal guidewire port.

3. A biliary catheter as in claim 2, wherein the tubular member is disposed about the shaft.

4. A biliary catheter as in claim 3, wherein the distal end of the tubular

member is fluidly sealed about the shaft.

5. A biliary catheter as in claim 4, wherein a proximal portion of the guidewire lumen extension is sized to restrict flow about the guidewire disposed therein.

6. ~~A biliary catheter as in claim 1, wherein the guidewire lumen extension is axially aligned with the guidewire lumen.~~

7. ~~A biliary catheter as in claim 6, wherein the shaft of the catheter is radially shifted at the proximal guidewire port such that the guidewire may remain substantially straight through the proximal guidewire port.~~

8. A biliary catheter as in claim 1, wherein the tubular member has a length of approximately 5 to 30 cm.

9. A biliary catheter as in claim 8, wherein the tubular member comprises a heat shrink tube.

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Q2 } 10. ~~A single operator exchange biliary balloon catheter for use in combination with a guidewire and an endoscope, comprising:~~

~~an elongate shaft having a proximal end, a distal end, an injection lumen and an inflation lumen extending therethrough;~~

~~an inflatable balloon disposed adjacent the distal end of the shaft in fluid~~

14. A single operator exchange biliary balloon catheter as in claim 10, wherein the guidewire lumen extension is axially aligned with the guidewire lumen.

15. A single operator exchange biliary balloon catheter as in claim 14, wherein the shaft of the catheter is radially shifted at the proximal guidewire port such that the guidewire may remain substantially straight through the proximal guidewire port.

16. A single operator exchange biliary balloon catheter as in claim 10, wherein the tubular member has a length of approximately 5 to 30 cm.

17. A single operator exchange biliary balloon catheter as in claim 16, wherein the tubular member comprises a heat shrink tube.

18. A method of using a biliary catheter, comprising the steps of:

providing an endoscope;

providing a guidewire;

providing a biliary catheter wherein the catheter includes an elongate shaft having a proximal end, a distal end and an injection lumen extending therethrough, a relatively short guidewire lumen extending through a distal portion of the shaft between a proximal guidewire port and a distal guidewire port, the guidewire lumen being in fluid communication with the injection lumen of the shaft, and a tubular member defining a guidewire lumen extension, the tubular member extending proximally from the proximal guidewire port to a proximal end disposed distal of the proximal end of the shaft, the

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tubular member defining a guidewire lumen extension;

inserting the endoscope into an alimentary canal of a patient;

inserting the guidewire into the guidewire lumen of the catheter;

inserting the catheter and guidewire into the endoscope;

retracting the guidewire from guidewire lumen such that a distal end of the guidewire resides in the guidewire lumen extension; and

injecting fluid into the lumen of the catheter, through the guidewire lumen and out the distal guidewire port.

19. A method of using a biliary catheter 18, further comprising the step of:
re-inserting the distal end of the guidewire into the guidewire lumen.

20. A method of using a biliary catheter as in claim 19, wherein the biliary catheter includes an inflatable balloon further comprising the step of:
inflating the balloon.